

Claims

1. A process of reducing the concentration of SO_x in a SO_x-containing gas, said process comprising treating said SO_x-containing gas with an effective amount of particulate petroleum coke at an effective SO_x removal temperature of reduced SO_x concentration to produce a treated gas; and removing said treated gas.
2. A process as defined in claim 1 wherein said petroleum coke is a fluid coke.
3. A process as defined in claim 1 wherein said effective temperature is selected from 600° - 1000°C.
4. A process as defined in claim 1 wherein said SO_x concentration is at least 1% v/v in said SO_x-containing gas.
5. A process as defined in claim 4 wherein said SO_x-containing gas is a flue gas.
6. A process as defined in claim 4 wherein said SO_x-containing gas is a smelter gas.
7. A process as defined in claim 1 wherein said SO_x-containing gas further comprises NO_x species, and said effective SO_x removal temperature is also a NO_x species removal temperature.
8. A process as defined in claim 1 wherein said SO_x-containing gas further comprises metal species, and said SO_x removal temperature is also a metal species removal temperature.
9. A process as defined in claim 8 wherein said metal is mercury.
10. A process for the production of activated carbon from particulate petroleum coke, said process comprising treating said petroleum coke with an effective amount of a SO_x-containing gas at an effective temperature to effect reduction of said SO_x concentration in said gas to produce a treated gas of reduced SO_x concentration as defined in claim 1 and said activated carbon; and collecting said activated carbon.
11. A process for the production of elemental sulphur from a SO_x-containing gas and particulate petroleum coke, said process comprising treating said petroleum coke with an effective amount of a SO_x-containing gas at an effective temperature to effect reduction of said SO_x concentration in said gas to produce a treated gas of reduced SO_x concentration according to claim 1, said activated carbon and said elemental sulphur; and collecting said activated carbon and said elemental sulphur.
- ~~12. A process for recovering the heat of reaction in a process as defined in claim 1 further comprising~~